

**REMARKS**

The Examiner is thanked for the thorough examination of the application. No new matter is believed to be added to the application by this Amendment.

**Status of the Claims**

Claims 1, 4, 6-10 and 14-16 are pending in the application. Claims 2, 3, 5 and 11-13 have been canceled. Claim 1 has been amended to include the subject matter of canceled claims 2 and 3. Support for the amendments to claim 1 can also be found in the specification in the paragraphs starting at page 4, line 4, page 4, line 8, page 5, line 22 and page 6, line 10. Support for limitations such as "amount and ratio . . . in the polymer composition" in claims 1, 10 and 14-16 can be found in the specification paragraphs in the paragraphs starting at page 5, line 22 and at page 6, line 13. Claim 7 has been amended to improve its language without reducing its scope.

**Rejection Under 35 U.S.C. §112, Second Paragraph**

Claims 5 and 10-16 are rejected under 35 U.S.C. §112, Second Paragraph as being indefinite. Applicants traverse.

At page 2 of the Office Action, the Examiner asserts that the basis for the percent calculation must be clearly defined in the specification or set forth within the claim. However, the disclosure in the paragraph starting at page 6, line 13 of the specification describes that the



polymer composition includes the solvent, such as water. As a result, it is clear that weight percentages of the entire composition are set forth in the claims.

At pages 2 and 3 of the Office Action, the Examiner asserts that the term “compounding ratio” in the claims is unclear. However, this term has been replaced with the phrase “amount and ratio . . . in the polymer composition,” which is described in the specification in the paragraphs starting at page 5, line 22 and page 6, line 13. As a result, the claims are clear, definite and have full antecedent basis. This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Heyd**

Claims 1-16 are rejected under 35 U.S.C. §102(b) as being anticipated by Heyd (U.S. Patent 4,315,779). Applicants traverse.

The present invention pertains to a mouth wetting agent. Of the many embodiments of the invention, claim 1 is directed to a combination of elements wherein 100 parts by weight of water-soluble polymer (selected from methyl cellulose, carboxymethyl cellulose, sodium carboxymethyl cellulose or hydroxyl ethyl cellulose), and 50-200 parts by weight of polyvalent alcohol (selected from glycerin, propylene glycol or sorbitol) are provided, wherein the amount and ratio of water-soluble polymer in the polymer composition is in the range of 8-15 % by weight, and the amount and ratio of polyvalent alcohol in the polymer composition is in the range of 4-30 % by weight.



Due to the characteristics of the present invention, suitable flexibility of the polymer composition (as a mouth wetting agent) can be attained. The results for the present invention can be found in the specification in Table 1 at page 12 of the specification.

Heyd pertains to non-adhesive gel compositions for stabilizing dentures. Heyd fails to disclose any compositions wherein the weight ratio of polyvalent alcohol to water-soluble polymer is in the range of the present invention, i.e. 50-200 to 100. In the compositions in the tables in column 4 in Heyd, which are the only compositions where the weight ratios are written, the ratios of glycerin to sodium carboxymethyl cellulose significantly exceed the upper limit of the range of present invention (i.e. 200 parts by weight/100 parts by weight). Therefore, the present invention is not anticipated by Heyd.

Further, the polymer compositions in Heyd are not for use as a mouth wetting agent, but for use in improving the fit and adaptation of dentures to the oral cavity. Since the requirements of these are different, Heyd fails to set forth a suitable range of the ratio of polyvalent alcohol to water-soluble polymer for mouth wetting agent. Therefore, the present invention is not anticipated by Heyd for these additional reasons.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Cornell**

Claims 1-3, 5-8, 10-12, 14 and 15 are rejected under 35 U.S.C. §102(b) as being anticipated by Cornell (U.S. Patent 4,233,288). Applicants traverse.



Cornell pertains to a chewing gum composition for delivering and preserving liquid content in the mouth. Cornell fails to disclose a wetting agent or any compositions wherein the amount and ratio of polyvalent alcohol and the amount and ratio of water-soluble polymer in the polymer composition are in the range of the present invention, i.e. 8-15 wt% and 4-30 wt%, respectively.

The composition of Cornell is a chewing gum and contains gum (see Tables I-V, for example). However, the present invention is a mouth wetting agent and, from the view point of suitably keeping the handle-ability of the mouth wetting agent, higher contents of polyvalent alcohol and water-soluble polymer are required (See the paragraph starting at page 5, line 22 of the specification). No composition in Cornell contains a polyvalent alcohol and a water-soluble polymer in the range of present invention. Therefore, the present invention is not anticipated by Cornell.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Morrow**

Claims 1-16 are rejected under 35 U.S.C. §102(b) as being anticipated by Morrow (U.S. Patent 4,537,689). Applicants traverse.

Morrow pertains to an oral lubricant for an athletic mouth protector. Morrow fails to disclose any compositions wherein the weight ratio of polyvalent alcohol to water-soluble polymer is in the range of present invention (i.e. 50-200 to 100).



Typically, the compositions in Examples 1 and 2 of Morrow (columns 3-4) contain glycerin and sodium carboxymethyl cellulose, but the ratio of glycerin to sodium carboxymethyl cellulose far exceeds the upper limit of the range of present invention (i.e. 200 parts by weight / 100 parts by weight.). In Examples 1 and 2 of Morrow, since glycerin is 100 ml and water is 500 ml, the amount of carboxymethyl cellulose, 0.45% (wt/vol) is less than 3-4 g, and 100 ml of glycerin far exceeds the upper limit of the range of present invention. Therefore, the present invention is not anticipated by Morrow.

Further, Morrow discloses oral lubricant compositions for athletic mouth protectors. Even if by adding the lubricant composition will help prevent the drying of the oral cavity, as asserted by the Examiner at pages 6 and 7 of the Office Action, the requirements for lubricant compositions are not same as the requirements for mouth wetting agents. In addition, Morrow does not disclose any suggestion for the ranges of the present invention. Therefore, the present invention is unambiguously not anticipated by Morrow.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Smitherman**

Claims 1-5 and 11-13 are rejected under 35 U.S.C. §102(b) as being anticipated by Smitherman (U.S. Patent 5,015,467). Applicants traverse.

Smitherman pertains to combined anticalculus and antiplaque compositions. Smitherman fails to disclose a water soluble starch, such as is used in the present invention.



First, the carboxy starch polymer of Smitherman is not the water-soluble polymer of the present invention. The carboxy starch polymer is made from starch, while the water-soluble polymer in the present invention is a cellulose-based polymer made from cellulose. (Molecular weights and other properties are different from each other.)

At page 8 of the Office Action, the Examiner asserts that the composition of Smitherman may contain thickening agents and the thickening agents include cellulose-based polymers such as sodium carboxymethyl cellulose. However, the content of thickening agent is about 0.5% to about 5.0% by weight of the total composition (see Smitherman at column 15, lines 43-44), which is much lower than the lower limit of the present invention. Probably, since the composition of Smitherman is for use as toothpaste and the like, a higher content of thickening agent is not required. In contrast, for attaining good effects as a mouth wetting agent, a higher content, i.e. content in the range of present invention, of thickening agent is desired. Since no composition containing a cellulose-based polymer in an amount of the ranges of the present invention is disclosed in Smitherman, the present invention is not anticipated by Smitherman.

Also, the requirements for toothpastes and the like are not same as the requirements for mouth wetting agents. Smitherman thus fails to disclose a mouth wetting agent. Therefore, the present invention is not anticipated Smitherman for these additional reasons.

This rejection is overcome and withdrawal thereof is respectfully requested.



**Rejection Under 35 U.S.C. §102(b) Over Turgeon**

Claims 1, 3, 6 and 8 are rejected under 35 U.S.C. §102(b) as being anticipated by Turgeon (U.S. Patent 5,541,165). Applicants traverse.

First, the subject matter of claim 2 (which was free of this rejection over Turgeon) has been incorporated into claim 1. As a result, claim 1 and its dependent claims are also free of this rejection over Turgeon.

Turgeon pertains to a saliva substitute. Turgeon fails to disclose a composition comprising a cellulose-based polymer, while the present invention includes a specific cellulose based polymer in a specific amount. Therefore, the invention disclosed in Turgeon is totally different from the present invention. Hence, the present invention is not anticipated in Turgeon.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Hunter**

Claims 1, 3, 5, 6, 8, 10, 12 and 15 are rejected under 35 U.S.C. §102(b) as being anticipated by Hunter (U.S. Patent 6,159,459). Applicants traverse.

First, the subject matter of claim 2 (which was free of this rejection over Hunter) has been incorporated into claim 1. As a result, claim 1 and its dependent claims are also free of this rejection over Hunter.



Hunter pertains to an oral lubricating composition that includes a beta-glucan polymer. The beta-glucan polymer disclosed in Hunter is not the water-soluble polymer of the present invention. Therefore, Hunter fails to disclose a composition containing a cellulose-based polymer, while the present invention comprises a specific cellulose based polymer in a specific amount. Therefore, the invention disclosed in Hunter is totally different from the present invention. Hence, the present invention is not anticipated in Hunter.

This rejection is overcome and withdrawal thereof is respectfully requested.

#### **Information Disclosure Statement**

The Examiner is thanked for considering the information Disclosure Statement filed January 25, 2005 and for making the initialed PTO-449 form of record in the application in the Office Action mailed March 1, 2006.

#### **Conclusion**

The Examiner's rejections have been overcome, obviated or rendered moot. No issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner, Ph.D. (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.



Application No. 10/522,248  
Amendment dated June 1, 2006  
Reply to Office Action of March 1, 2006

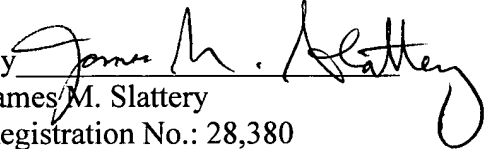
Docket No.: 4578-0113PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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